QC5- Inspect part completeness to step on W/O

Memo

120

QC

Quality Control

NCR:	Yes) /	No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Date: 13/1/17

									QA Closed:	Date:	: //	
Work Ord	er:C	1439	2		DISPOSITION	,		AGAINST DE				
			<u>-0</u>	<u>H</u>	Rework Scrap Use-as-is Work Order Update	e i	Machining	Crosstube Small Fab Finishing Composite	4	d. Eng. Coor.	Engineering Quality Other	
Root	Rework Scrap Machining Small Fab Prod. Eng. Coor.  NCR No. 13-1208 Work Order Update Use-as-is  Work Order Update Initial Action Description of work order update or Non-conformance Chief Eng Description  The fab S. Large Fab D. Composite Supplier  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Description Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Date Verification QC Inspector  NCR No. 13-1208 Work Order Update Initial Action Date Verification QC Inspector Initial Action Date Verification QC Inspector Initial Action Date Ve											
Cause	Date	Step	Qty	(	or Non-conformance	Chief Eng	Descr	iption	Date	Verification	QC Inspector	
	× 12-1211	3		hole bent	tabs have been using drill jig	049 16	in holes	before	H	0AS 15		
Material Setup			/	07 9466	because holes wouldn't	052042	trying on	drell jig.	12-12-18	12/2/18	DAS	
Other Process				accept	locating pins. Jig	13/18	Oty XI SCAP	up Noi			300	
Supplier	$\vdash$			was for	ced into holes resulting		•		2/1	,/	as zoyz	
Training				in ben	+ tabs. cours Part			, ,	// .//	201.11	13/19	
Unapproved							ton sint dan	h wloatsta	b 1/1/1	7		
					FA	AULT CATE	GORY = 100				·	
Landi	ng Gear	-			General			(12)				
	Bending	I			Bend	Grain	(1)	(VL) [	9 valized	×	Pressure/Forced	
	Centre	Not Conce	ntric to	o/s	BOM/Route	Hardwa	are / 🛱 🖰	6/2.	Over/Under	tolerance	Temperature/Cure	
	Cracks				Broken/Damaged *	Inspect	ion Incomplete		Part Incorred	ct	Weld	
	Crushed	I/Crimped			Burrs	Instruct	tions Incomplete/L	Jnclear	Part Lost/Mi	ssing	Wrong Stock Pulled	
	Cuffs				Contamination	Mainte	enance 🔪 🛴		Part Moved			
	Heat Tr	eat			Countersink	Mislabe	eled		Positioned V	Vrong		
	Inspect	on Strip in	Tube		Cut Too Short	Misrea	d		Power Loss/	Surge	Other	
	Ripples	in Bend			Drill Holes	Offset						
	Torque	Waves in I	Extrusio	n	Drawing	Out of	Calibration					
·	Turning	Sequence			Finish	Out of	Sequence					
* .	Wave/T	wist in Tul	oe ,		Folio	Outside	Dimensions	•				

\*150\* HandFinish

Hand Finishing

9 1/2-12-19

December 12, 2012 10:51:04 AM Item ID: D2207-041 Accept Setup Start \*N900040100\* Revision ID: Item Name: Housing Weldment \*10\* **Start Oty:** 10.00 **Start Date:** 12/12/12 **Cust Item ID:** Required Date: 12/21/12 Reg'd Qty: 10.00 \*10\* Customer: Reference: Run Date: Tooling: Approvals: **Process Plan:** Date: OC: Date: \_\_\_ SPC (Y/N): Date: Tool (U Reject Sens. Over mr 1901 & Plan Accept Reject asp. Set Jp/ Work Center IU Description Code Giv Otv Number Stamp Run Hours 130 0.00 Small Fab \*120\* EZ 12-12-18 Small Fab 0.00 Memo Small Fab Drill holes using DT8557 as per Dwg D2207 DT 9466 140 QC5- Inspect part completeness to step on W/O \*110\* 0.00 2 19 OC Memo **Quality Control** 150 Chemical Conversion Coat per OSI005 4.1 0.00

0.00

Memo

											DQA:	Date	2:
NCR:	Yes /	No				WORK ORDER NON-O	O	<b>NFORM</b>	MANCE / UPDATE				
											QA Closed:	Date	9:
Work Ord	ar·					DISPOSITION			AGAI	NST DE	PARTMENT	PROCESS	
Work Ord	CI					Rework	1		Skid-tube Crosst	ube	]	Water Jet	Engineering
Part I	No.					Scrap	1		Machining Small		Pro	d. Eng. Coor.	Quality
						Use-as-is			noforming Finis	ning	4	e/Packaging	Other
NCR I	No			<del>,</del>		Work Order Update	]		Large Fab Compo	site		Supplier	
				ı							l c: 0		····
Root			<b>C</b> .	۵.	ţ	ption of work order update		Initial	Action		Sign &		
Cause		ate	Step	Qty		or Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Doc/Data	Н												
Equip/Tooling	Ш												
Operator	Ш												
Material	Ц												
Setup	Ш												
Other	Ш						ļ						
Process	Ш												
Supplier									*				
Training									u.e				
Unapproved													
						F	AUL	T CATE	GORY				
Landi	ng Gear	D.				General		_	†		_	_	
	Ber	nding				Bend		Grain	**		Ovalized	Γ	Pressure/Forced
	Cer	itre No	t Conce	ntric to	o/s	BOM/Route		Hardwa	re	Γ	Over/Under	tolerance	Temperature/Cure
	Cra	cks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
	Cru	shed/0	Crimped.			Burrs		Instruct	ions Incomplete/Unclear		Part Lost/M	ssing	Wrong Stock Pulled
1	Cuf	fs				Contamination		Mainte	nance		Part Moved	-	<del></del>

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Page 3

December 12, 2012 10:51:04 AM Item ID: D2207-041 Accept \*N900040100\* Setup Start Revision ID: Item Name: Housing Weldment \*10\* **Start Oty: 10.00 Start Date:** 12/12/12 **Cust Item ID:** Required Date: 12/21/12 Rea'd Otv: 10.00 \*10\* **Customer:** Reference: Run Approvals: Process Plan: Date: Tooling: Date: Stop QC: SPC (Y/N): Date: Date: Reject Sequence 12. Operation Set Up/ Tuoi ID Tool# Plan Accept Reject: I sp. Work Center ID Description **Run Hours** Code Qty Otv-Number Stamp 160 White Gloss(Ref:4.3 0.00 9 6 8/13/201 \*160\* Powdercoat 0.00 OVEN TEMPERATURE: Powder Coating 170 OC3- Inspect Part Finish 0.00 \*170\* QC 0.00 Memo **Quality Control** 180 0.00

0.00

\*120\*

Large Fab Large Fab

Large Fab

Memo

Install AK57-1032-130 as per Dwg D2207

9x f M 13/01/07

							DQA:	Date:			
NCR: Yes	/ No			WORK ORDER NON-C	CONFORM	MANCE / UPDAT	<b>E</b> QA Closed:	Date:			
Work Order:				DISPOSITION	DISPOSITION AGAINST DEPARTMENT/PROCESS						
Part No. NCR No.				Rework Scrap Use-as-is Work Order Update	]   '	Machining Sr noforming F	<del></del>	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other		
Root	-			Description of work order update	Initial	Action	Sign &				
Cause	Date	Step	Qty	or Non-conformance	Chief Eng	Descriptio	n Date	Verification	QC Inspector		
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training											

Landing	Gear	General	 * **	٠٠.		•
	Bending	Bend	Grain		Ovalized	Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route	Hardware		Over/Under tolerance	Temperature/Cure
	Cracks	Broken/Damaged	Inspection Incomplete		Part Incorrect	Weld
	Crushed/Crimped,	Burrs	Instructions Incomplete/Unclear		Part Lost/Missing	Wrong Stock Pulled
	Cuffs	Contamination	Maintenance		Part Moved	_
	Heat Treat	Countersink	Mislabeled		Positioned Wrong	 _
	Inspection Strip in Tube	Cut Too Short	Misread		Power Loss/Surge	Other
L	Ripples in Bend	Drill Holes	Offset			
	Torque Waves in Extrusion	Drawing	Out of Calibration			
	Turning Sequence	Finish	Out of Sequence			

Outside Dimensions

**FAULT CATEGORY** 

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Folio

Unapproved

Work Order ID 94392 Page 4 December 12, 2012 10:51:04 AM D2207-041 Accept \*N900040100\* Setup Start Item ID: **Revision ID:** Item Name: Housing Weldment \*10\* **Start Qty: 10.00 Start Date:** 12/12/12 **Cust Item ID:** Req'd Qty: 10.00 Required Date: 12/21/12 **Customer:** Reference: Run \_\_\_\_ Date: \_\_\_\_ Approvals: Process Plan: Tooling: Date: QC: SPC (Y/N): Date: Date: Reject i og. ID Tool# Plan Accept Reject Sequence HD/ Operation set Up/ Insp. Qty Qty Number Stamp Code Work Center ID Description Ran Hours 190 QC5- Inspect part completeness to step on W/O 0.00 \*190\* QC 0.00 Memo Quality Control Identify as per dwg & Stock Location 1477 0.00 200 \*200\* Packaging 0.00 Memo Packaging 210 QC21- Final Inspection - Work Order Release 0.00 ML5 13-01-07 13-01-07 0.00 Memo Quality Control

NCR:	Yes /	No	WORK ORDER NON-CONFORMANCE
	/		

QA:	Date:	

										•	DQA:	Date	•
NCR:	Yes	/ No				WORK ORDER NON-O	CON	NFOR	MANCE / UF	PDATE	0.4.61	<b>.</b>	
											QA Closed:	Date	:
Work Ord	er:					DISPOSITION				AGAINST D	EPARTMENT,	/PROCESS	
						Rework	]		Skid-tube	Crosstube	7	Water Jet	Engineering
Part	No.					Scrap		1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR	No.					Work Order Update			Large Fab	Composite	_	Supplier	
Root			1		Descri	otion of work order update		nitial	Δ	ction	Sign &		
Cause		Date	Step	Qty		or Non-conformance		ief Eng	1	cription	Date	Verification	QC Inspector
Doc/Data				/									
Equip/Tooling							ļ						
Operator													
Material													
Setup											ŀ		
Other									)				
Process	_												
Supplier													
Training	<u> </u>					,							
Unapproved			<u>l</u>	1			<u> </u>	T 64TF	6007				\$ v
						······································	AUL	T CATE	GORY				
Landi	ing (	1				General		٠			٦, , ,	Г	
	-	Bending			o /s	Bend BOM/Route	-	Grain		-	Ovalized Over/Under	<u></u>	Pressure/Forced Temperature/Cure
	$\vdash$	Centre No Cracks	ot Concei	יונונינט נס נ	U/3  -	Broken/Damaged	-	Hardwa	ire ion Incomplete	-	Part Incorre	<del> </del>	Weld
	$\vdash$	Crushed/	Crimned			Burrs	$\vdash$	l '	tions Incomplete	/i Inclear	Part Lost/M	<b>⊢</b>	Wrong Stock Pulled
	$\vdash$	Cuffs	i iiipeu		-	Contamination	-	Mainte	·		Part Moved	- <u>-</u>	
	$\vdash$	Heat Trea	at			Countersink		Mislabe			Positioned \		
		Inspectio		Tube	<u> </u>	Cut Too Short		Misrea		<u> </u>	Power Loss		Other
		Ripples in	•			Drill Holes		Offset		L		~ <u>_</u>	
		Torque W		xtrusio	n 🗀	Drawing		Out of	Calibration				
		Turning S	equence			Finish		Out of :	Sequence				
		Wave/Tw	ist in Tub	oe .		Folio		Outside	e Dimensions				

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December 12, 2012 10:51:03 AM

Work Order ID:

94392

Parent Item:

D2207-041

Parent Item Name:

Housing Weldment

**Start Date:** 12/12/12

Required Date: 12/21/12

Start Qty: 10.00

Required Qty: 10.00

Comments:

IPP C 01.10.18 Added Step 10 and 11 IPP D 07-10-11 REV C dwg

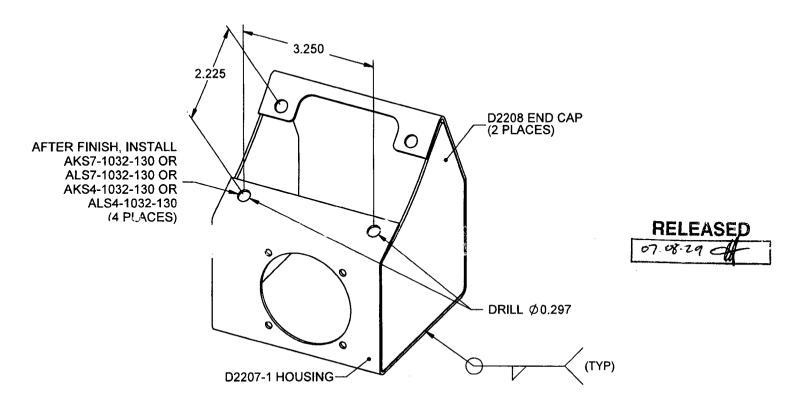
SM DD verified by EC

	IPP D 07-10-11	REV C dwg		DD verified	by EC								
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS7-1032-130 Insert *   ALS -	032 · 130	Purchased	No			100	Each	712.0000	4	49′	36	\	
,				Location		Loc Qty	Lo	c Code				•	
				FG		100							
					1444	100	11/2	1080		×360			
				FP001		612	, ,						
				117	7717	27				<u> </u>			
					8966	22							
					9530	73							
					9775	2				<del></del> -			
					)181 1444	12 176							
					2474	3							
					2763	297							
D220741 Housing Body		Manufactured	No			180	Each	10.0000	1 (************************************	Q 10	0-/2-/2	المنافقة ا	1- 1-16. W-24. PWS
				Location		Loc Qty	Lo	c Code					
				WA001		10							
	*			91	785	10				0			
D2208		Manufactured	No			100	Each	35.0000	2	20	4		
Endcap, Torquemeter										EZ_16	1-12 12		
				Location		Loc Qty	Lo	c Code					
				WA002		35							
				381	144	1							
				858		6				5			
				<b>8</b> 59	908	28				14			

			DQA:	Date:	
NCR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			
			QA Closed:	Date:	

									QA Closed:	Date:	
Work Orde	r:				DISPOSITION			AGAINST DE	PARTMENT	PROCESS	
Part N NCR N					Rework Scrap Use-as-is Work Order Update		Skid-tube  Machining  moforming  Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. ee/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Initial	Act	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator [		ľ									
Material											
Setup											
Other											
Process											
Supplier											
Training	_										
Unapproved									<u> </u>		
					· · · · · · · · · · · · · · · · · · ·	AULT CATE	GORY				
Landir	g Gear				General			,	, 1	_	<b>.</b>
-	Bending				Bend	Grain			Ovalized		Pressure/Forced
}	<del></del> {	ot Conce	ntric to (	<sup>O/S</sup>	BOM/Route	Hardwa			Over/Under	<del> </del>	Temperature/Cure
}	Cracks	<b>.</b>			Broken/Damaged	——————————————————————————————————————	ion Incomplete		Part Incorre	<b></b>	Weld
		Crimped.		-	Burrs	<b>⊢</b>	tions Incomplete/I	Unclear	Part Lost/M	ssing	Wrong Stock Pulled
-	Cuffs	_*		-	Countamination	<b>—</b>	enance	<del> </del>	Part Moved	Mana	
}	Heat Trea		Tuba	-	Countersink Cut Too Short	Mislab Misrea			Positioned V Power Loss/	_	Other
}	Ripples in	•	lube	-	Drill Holes	Offset	u	<u>L.</u> .	Jeomer ross/	Juige	Tottlei
}	<del>_</del>	Vaves in E	ytrusia	,	Drawing	<b></b>	Calibration				
}	<b>—</b>	Sequence		·	Finish	$\vdash$	Sequence				
ţ	Wave/Tw	-	e	一	Folio	$\vdash$	e Dimensions				

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



## **D2207-041 HOUSING ASSEMBLY**

CLIALIA112 W10, 94392

## NOTES:

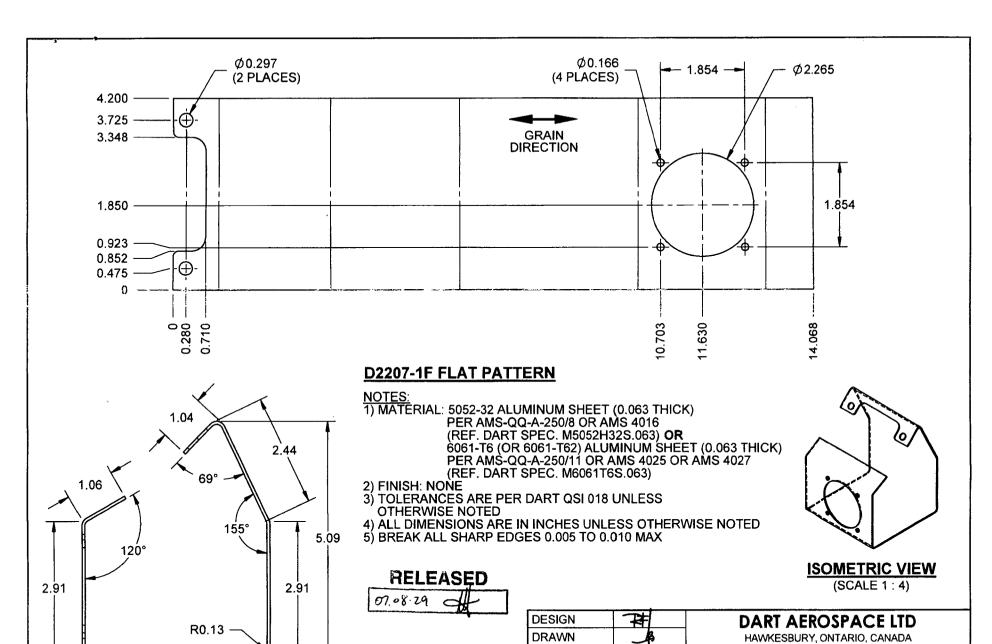
1) WELD PER DART QSI 004

2) GRIND WELDS FLUSH

3) FINISH: ACID ETCH AND ALODINE PER QSI 005 4.1
POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3
4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

DESIGN	N 🗇	CE L	TD				
REV.		DESCRIPTION	BY	DATE			
Α	NEW ISSUE	NEW ISSUE					
В	REDRAWN		RF	01.02.23			
С	- UPDATE FLAT - TOOLING REV		МВ	07.06.28			

DESIGN	7#	DART AEROSPACE LTD	
DRAWN	_A	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. C
MFG. APPR.	B	D2207	SHEET 1 OF 2
APPROVED	-14	TITLE	SCALE
DE APPR.	-41	HOUSING	1:2
DATE 07.06.28		COPYRIGHT © 1994 BY DART AEROSPACE LTD  THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



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07.06.28

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**SCALE** 

1:2